



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of KUTTAPPA, Sanjay

Filing Date: 23 MAY 2001

Serial No.: 09/863,910

Title: HEAVY FILLER IN GOLF BALL CORES

Examiner: GORDON, RAEANN

Group Art Unit: 3711

Att'y Docket: DSCK-1158-D1

DECLARATION UNDER RULE 1.131

I, SANJAY M. KUTTAPPA, do hereby declare and say that:

1. I am the inventor and applicant of the invention entitled "HEAVY FILLER IN GOLF BALL CORES" disclosed and claimed in 09/863,910 filed on May 23, 2001, which is a continuation of 09/393,905 filed July 15, 1999, which is a continuation of 60/093,229 filed July 17, 1998.

2. The invention described and claimed in said application was conceived and reduced to practice prior to June 26, 1997, as evidenced by the following facts, which are of my own knowledge.

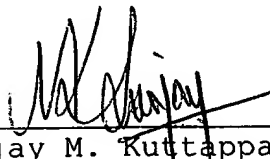
(a) Attached hereto as an exhibit is a copy of a three page internal memorandum, which I authored, entitled "Dunlop Maxfli Sports Corporation Invention Disclosure"

submitted to the management of Dunlop Maxfli Golf on July 16, 1998. The exhibit accurately displays the relevant information regarding the instant invention. The document memorializes the production and testing of a golf ball core containing titanium filler produced during the month of May 1997 and the conception of various fillers having a specific gravity greater than 5.4. The core was produced and tested for use with various golf ball configurations.

3. My invention is covered by the claims of U.S. Application Serial No. 09/863,910.

All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 8 of the United States Code, and that such willful false statement may jeopardize the validity of the application or any patents issuing thereon.

Signed:



Sanjay M. Kuttappa

AUG. 12, 2002

Date:

ATTN: MARK LORUSSO 603 427 5530

Ph: 603 427 0070

7/16/98

REF # RD 3049

FROM: SANJAY KUTTAPPA 864 647 4017

Invention Disclosure No. DBK-1158-C1  
(To be given by your patent attorney)**DUNLOP MAXFLI SPORTS CORPORATION INVENTION DISCLOSURE**

Confidential and Proprietary Communication to Patent Attorney

I. Title of the Invention: HEAVY FILLER IN GOLF BALL CORES

II. Potential Inventor(s). If you believe you conceived of the invention, put (c) after your name. If you believe you developed the invention, put (d) after your name. If you believe you contributed to the invention, put (ct) after your name. An individual may have performed all three actions, in which case all three designations should appear next to the name.

<u>SANJAY KUTTAPPA</u>	<u>(864) 654-5435</u>	<u>(c, d)</u>
Name	Phone	
<u></u>	<u></u>	<u></u>
Name	Phone	
<u></u>	<u></u>	<u></u>
Name	Phone	

III. Description of Invention - If possible, attach drawings, data, or other materials to assist in the understanding of the invention.

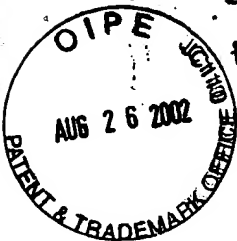
— SEE ATTACHMENT —

IV. What is the closest related technological development? Attach any patents or publications.

N/A

V. What advantages does your invention provide over the prior technology? Specify the differences between your invention and the closest prior technology.

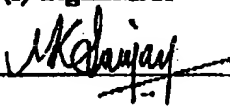
— SEE ATTACHMENT —

VI. When was this invention first conceived or observed? MAY 14, 1997VII. When were the first sketch, drawings or written description made? MAY 14, 1997VIII. When was the first operating model or prototype made? MAY 21, 1997

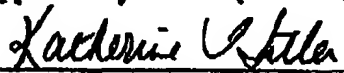
- IX. When was the first test or operation and the results? MAY 16, 1997
- X. Where is the first description of the invention located? LAB NOTEBOOK 077 #15 P 76
- XI. To whom was the invention first described? When? INTERNAL MAY 14, 1997
- XII. Public Disclosure and Sales Activity. If any aspect of the invention has been disclosed to anyone outside the company, used commercially, or generally offered for sale, please state when this occurred. NOT DISCLOSED OUTSIDE THE COMPANY.  
THE BALLS WERE SHIPPED OUT JULY 29, 1997.
- a. Have you told a potential customer that this invention is under development and may be available in the future? When? N/A
- b. Have you taken an order which you intend to fill by supplying this invention? By whom and when? N/A

**COMMERCIAL CONCERNS**

- XIII. What is your present intended use for the invention?  
IN GOLF BALL CORES AND/OR CENTERS
- XIV. What are possible uses/markets for the invention? Consider uses in combination with other technology.  
GOLF BALLS
- XV. Would your invention be of particular use in countries other than the U.S.?  
YES
- XVI. Has there been any commercial interest by third parties for a product which this invention satisfies? Identify these parties.  
N/A
- XVII. Potential Inventor(s) Signatures

 Date: JULY 16, 1998  
\_\_\_\_\_  
Date: \_\_\_\_\_  
\_\_\_\_\_  
Date: \_\_\_\_\_

The foregoing document and attachments were read and understood by me on the date opposite my name. (A witness cannot be a potential inventor.)

 7/16/98  
Signature of Witness Date

## ATTACHMENT

### III. DESCRIPTION OF INVENTION :

Fillers are used in golf ball core and/or center formulations to adjust the weight of the ball. Conventional fillers used are calcium carbonate (of specific gravity 2.73), barium sulfate (sp. gr. 4.3) and or zinc oxide (sp. gr. 5.6).

Inorganic powders of metals, oxides etc., with high specific gravity i.e., 5.40 and higher is considered here. Following is a list of such inorganic elements that can be used in the invention :

<u>Inorganic Element</u>	<u>Specific Gravity</u>
Tungsten	19.3
Bismuth	9.8
Copper	8.9
Bismuth oxide	8.9
Nickel	8.9
Cobalt	8.9
Iron/Steel	7.7
Tin	7.3
Chromium	7.2
Zinc	7.1
Bismuth subcarbonate	6.9
Cupric oxide	6.4
Barium tungstate	6.4
Cuprous oxide	6.0
Ferrous oxide	5.7
Zirconium dioxide	5.5

### V. WHAT ADVANTAGES DOES THE INVENTION PROVIDE ?

The volume occupied by a high specific gravity filler in a core/center compounds is less when compared to a relatively lower specific gravity filler. This would increase the polymer/rubber content in the formulation for a given volume.

This in effect would increase the C.O.R. (coefficient of restitution) or the rubberiness of the product. This transfers to greater distance for the same or lower compression in a golf ball using such fillers.